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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,518	09/16/2003	Akira Yamaguchi	Q76261	1366
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SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER PHAM, TAMMY T	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/662,518

Applicant(s)

YAMAGUCHI ET AL.

Examiner

TAMMY PHAM

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7 and 9-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 9-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 4, 8, have been cancelled. Claims 19-20 have been added. Claims 1-3, 5-7, 9-20, are pending.

Response to Arguments

2. Applicant's arguments discussed during the phone interview of 19 October 2008 have been fully considered and are found to be persuasive. The final rejection of 15 October 2008 has been withdrawn and prosecution has been reopened. However, due amendments of 16 July 2008, this action is made final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-7, 9-16, 18-20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara (U.S. Patent No.: 5,767,837) in view of Applicant's Admitted Prior Art (AAPA).
4. **In regards to independent claim 1**, Hara teaches of an monochromatic image display system comprising a flat panel-like display device (Fig. 9, item 1), each picture element (Fig. 8(a), a group of items 4) of the display device (Fig. 9, item 1) emitting light in a same color (column 4, line 34),

5. wherein each picture element (Fig. 8(a), group of items 4) of the display device (Fig. 9, item 1) comprises a series of spatially adjacent cells (Fig. 8(a), a single block of item 4), each cell (Fig. 8(a), single block of item 4) is configured to express tones in three-or-more levels of the same color; and the plurality of picture elements (Fig. 8(a), group of items 4) expressing a monochromatic image (column 4, line 34),
6. the monochromatic image display system (Fig. 9, item 1) further comprising at least one of:
 7. an area modulation means which controls an output luminance of each picture element (Fig. 8(a), group of items 4) by selectively turning on and off input signals to the respective cells (Fig. 8(a), item 2), for the picture element (Fig. 8(a), group of items 4), independently of each other (column 4, lines 35-36).
8. Hara fails to teach that the same color falls within the region surrounded by points (0.174, 0), (0.28, 0.32) and (a, 0.32) as represented by co-ordinates (x, y) on a CIE chromaticity diagram, wherein c_{\sim} represents the x-coordinate of the intersection of a spectrum locus and a straight line $y=0.32$;
9. wherein the cells are driven so that a maximum luminance of each picture element is in a range of 100cd/m² to 10000cd/m².
10. AAPA teaches that the same color falls within the region surrounded by points (0.174, 0), (0.28, 0.32) and (a, 0.32) as represented by co-ordinates (x, y) on a CIE chromaticity diagram,

wherein c_{\sim} represents the x-coordinate of the intersection of a spectrum locus and a straight line $y=0.32$ (section [0011], where blue basically falls within these coordinates).

11. It would have been obvious to one with ordinary skill in the art at the time the invention was made to have the same color be blue as taught by AAPA with the monochromatic display device of Hara. This combination is obvious because this combination meets the known demand in the medical field that medical images be displayed in blue for easier viewing (AAPA, section [0011]).

12. AAPA teaches that the cells are driven so that a maximum luminance of each picture element is in a range of 100cd/m² to 10000cd/m² (sections [0014-0015]).

13. It would have been obvious to one with ordinary skill in the art at the time the invention was made to have the maximum luminance of each picture element fall within the range of 100cd/m² to 10000cd/m², as taught by AAPA with the monochromatic display device of Hara. This combination allows for the brightness discrimination ability to be maximized (AAPA, section [0015]).

14. **In regards to independent claim 20**, Hara teaches of a monochromatic image display system comprising a flat panel-like display device (Fig. 9, item 1), each picture element (Fig. 8(a), group of items 4) of the display device (Fig. 9, item 1) emitting light in a same color (column 4, line 34),

15. wherein each picture element (Fig. 8(a), group of item 4) of the display device (Fig. 9, item 1) comprises a series of spatially adjacent cells (Fig. 8(a), single item 4);
16. each of the cells (Fig. 8(a), single item 4) is controlled independently of the other spatially adjacent cells (Fig. 8(a), single item 4, column 4, lines 35-36); and
17. inherently teaches that there are a plurality of combinations of output intensities of the cells of a picture element (Fig. 8(a), group of item 4) that result in a given output intensity of the picture element (Fig. 8(a), group of item 4).
18. Hara fails to teach that the same color falls within the region surrounded by points (0.174, 0), (0.28, 0.32) and ($\sim t$, 0.32) as represented by co-ordinates (x, y) on a CIE chromaticity diagram, wherein $c\sim$ represents the x-coordinate of the intersection of a spectrum locus and a straight line $y=0.32$.
19. AAPA teaches that the same color falls within the region surrounded by points (0.174, 0), (0.28, 0.32) and (a, 0.32) as represented by co-ordinates (x, y) on a CIE chromaticity diagram, wherein $c\sim$ represents the x-coordinate of the intersection of a spectrum locus and a straight line $y=0.32$ (section [0011], where blue basically falls within these coordinates).
20. It would have been obvious to one with ordinary skill in the art at the time the invention was made to have the same color be blue as taught by AAPA with the monochromatic display device of Hara. This combination is obvious because this combination meets the known demand

in the medical field that medical images be displayed in blue for easier viewing (AAPA, section [0011]).

21. **In regards to claim 5**, Hara as modified by AAPA above in claim 1, teaches that the maximum luminance of each picture element (Hara, Fig. 8(a), group of items 4) is in a range of 500cd/m² to 5000cd/m² (AAPA, sections [0014-0015]).

22. **In regards to claim 6**, Hara as modified by AAPA above in claim 1, teaches that the flat panel-like display device is a liquid crystal panel (AAPA, section [0009]).

23. **In regards to claim 7**, Hara as modified by AAPA above in claim 1, teaches that the flat panel-like display device is an organic EL panel (AAPA, section [0009]).

24. **In regards to claim 9**, Hara inherently teaches that an average of the output luminance of all the cells (Fig. 8(a), a single block of item 4) within each respective picture element (Fig. 8(a), a group of item 4) correspond to an output luminance of the respective picture element (Fig. 8(a), a group of item 4).

25. **In regards to claims 10, 14**, Hara teaches of a cell signal generating means (Fig. 9, item 10) for generating, based on a monochromatic image signal indicating an output luminance of each picture element (Fig. 8(a), a group of item 4) of the monochromatic image, a cell signal for each spatially adjacent cell (Fig. 8(a), a single block of item 4) of a respective picture element

(Fig. 8(a), a group of item 4) of the display device (Fig. 9, item 1), wherein each respective picture element (Fig. 8(a), a group of item 4) of the display device (Fig. 9, item 1) corresponds to a picture element (Fig. 8(a), a group of item 4) of the monochromatic image.

26. **In regards to claim 12**, Hara as modified by AAPA above in claim 1, teaches that the same color is blue.

27. **In regards to claim 11, 15**, Hara teaches of a tone number conversion means for carrying out a tone number conversion processing on an input original monochromatic image signal, thereby generating the monochromatic image signal indicating the output luminance of each picture element (Fig. 8(a), group of item 4) of the monochromatic image (column 3, lines 10-15),

28. wherein a number of tones represented by the monochromatic image signal is no greater than a number of tones which can be expressed by each respective picture element of the display device, and

29. wherein a number of tones represented by the input original monochromatic image signal is greater than the number of tones represented by the monochromatic image signal (the display is able to produce red, green, and blue (column 4, lines 365-37) but in the monochrome, the image signal is one color (by definition, column 4, line 34).

30. **In regards to claim 13**, Hara inherently teaches that a sum of the output luminance of all the cells (Fig. 8(a), single block of item 4) within each respective picture element (Fig. 8(a), a

group of item 4) correspond to an output luminance of the respective picture element (Fig. 8(a), a group of item 4).

31. **In regards to claim 16**, Hara teaches of a light source (column 2, lines 28-35).
32. **In regards to claim 18**, Hara as modified by AAPA above in claim 1, teaches that the number of levels expressed per cell ranges from 3 to 256 (AAPA, section [0017]).
33. **In regards to claim 19**, Hara teaches that the light source is time modulated to define the intensity (column 1, lines 20-40).
34. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara (U.S. Patent No.: 5,767,837) in view of Applicant's Admitted Prior Art (AAPA) and Nakamura et al. (U.S. Patent No.: 5,059,356).
35. **In regards to claims 2, 17**, Hara and AAPA fails to teach that the display device is provided with a polarizing film which are colored to a predetermined color.
36. Nakamura teaches that the display device is provided with a polarizing film which are colored to a predetermined color (column 3, lines 1-2).
37. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include a polarizing film as taught by Nakamura with the display device of Hara and AAPA. This combination provides for a polymer which has improved transparency,

moisture, thermal, and weather resistance qualities (Nakamura, column 2, lines 65-69).

38. **In regards to claim 3**, Hara as modified by AAPA and Nakamura above in claim 2, teaches that at least one element comprises polyethylene terephthalate colored with anthraquinone dye having the predetermined color (Nakamura, column 4, lines 10-15).

Conclusion

39. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

40. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammy Pham whose telephone number is (571) 272-7773. The examiner can normally be reached on 8:00-5:30 (Mon-Fri).

42. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

43. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TP
10 November 2008

Tammy Pham
/Tammy Pham/
Examiner, Art Unit 2629

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